

Claims

1. A conveyor belt comprising an outer layer (1) and a conveyor-belt base (2), characterized in that  
5 the outer layer (1) has been produced via plasma coating.
2. The conveyor belt as claimed in claim 1, characterized in that the outer layer (1) comprises an  
10 underlayer (3) produced via plasma coating, and adheres by means of this underlayer (3) to the conveyor-belt base (2).
3. The conveyor belt as claimed in claim 1 or 2,  
15 characterized in that the thickness of the outer layer (1) is in the range from 0.005 to 10  $\mu\text{m}$ .
4. The conveyor belt as claimed in claim 2,  
20 characterized in that the thickness of the underlayer (3) is from 0.005 to 10  $\mu\text{m}$ .
5. A process for production of an outer layer (1) on a conveyor-belt base (2), characterized in that,  
25 in the presence of a gaseous monomer capable of excitation in a plasma, the conveyor-belt base (2) is exposed to a plasma in such a way that the gaseous monomer is excited for purposes of plasma coating of the conveyor-belt base (2).
- 30 6. A process for coating of a conveyor-belt base (2) with an outer layer (1) which comprises an underlayer (3), characterized in that, in the presence of a gaseous monomer capable of  
35 excitation in a first plasma, the conveyor-belt base (2) is exposed to a first plasma in such a way that the first gaseous monomer is excited for purposes of forming an underlayer (3) on the conveyor-belt base (2); and then either

a) in the presence of said first monomer, the underlayer (3) is exposed to a second plasma different from the first plasma in such a way that the first monomer is excited for purposes of plasma coating of the underlayer (3),  
5 or

(b) in the presence of a second gaseous monomer different from the first monomer and capable of excitation in a plasma, the underlayer (3) is exposed to a plasma in such a way that the second monomer is excited for purposes of plasma coating of the underlayer (3).  
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7. The process as claimed in claim 5 or 6, characterized in that the plasma(s) is/are generated via microwaves whose frequency is from 1 to 10 GHz, or via radio waves whose frequency is from 5 to 30 MHz.  
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8. The process as claimed in any of the preceding claims 5 to 7, characterized in that the monomer(s) has/have been selected from: ethene; its derivatives substituted with halogen and/or substituted with trifluoromethyl, or its derivatives substituted with  $\pi$ -electron-withdrawing groups; the unbranched or branched alkanes having from 2 to 12 carbon atoms; the cyclic ( $C_4$ - $C_7$ ) alkanes; the halogenated alkanes, where the halogen atoms have been selected from fluorine and chlorine and where the total calculated from the number of carbon atoms plus the number of fluorine atoms plus twice the number of chlorine atoms is at most 12; the silicon-containing monomers, in particular the ( $C_3$ - $C_{10}$ ) silanes, ( $C_4$ - $C_8$ ) siloxanes, or ( $C_4$ - $C_8$ ) silazanes; acetylene and its derivatives substituted with unbranched or branched, optionally fluorine-substituted alkyl substituents, where the total  
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number of all of the carbon atoms plus all of the  
fluorine atoms is at most 12; and the iso- or  
heterocyclic unsubstituted or (C<sub>1</sub>-C<sub>4</sub>)-alkyl- or  
(C<sub>2</sub>-C<sub>4</sub>)-alkenyl-substituted or halogen-substituted  
5 aromatics, where the total calculated from the  
number of carbon atoms plus the number of oxygen  
atoms plus the number of nitrogen atoms plus the  
number of fluorine atoms plus twice the number of  
sulfur atoms plus twice the number of chlorine  
10 atoms is at most 12.

9. The process as claimed in claim 8, characterized  
in that the monomer(s) is/are selected from  
tetrafluoroethylene, 1,2-difluoroethylene, acetyl-  
15 ene, or hexamethyldisiloxane (HMDSO).

10. The use of an outer layer (1) produced via plasma  
coating for increasing the chemicals resistance,  
solvent resistance, or scratch resistance of a  
20 conveyor-belt base (2), or for reducing the  
adhesiveness of a conveyor-belt base (2).